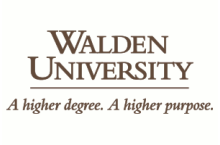

2019

Improving Nurse Well-Being Through a Mindfulness-Based Education Strategy

Sandra Dearholt
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Sandra Dearholt

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Mattie Burton, Committee Chairperson, Nursing Faculty
Dr. Tracy Andrews, Committee Member, Nursing Faculty
Dr. Casey Cole, University Reviewer, Nursing Faculty

The Office of the Provost

Walden University
2019

Abstract

Improving Nurse Well-Being Through a Mindfulness-Based Education Strategy

by

Sandra L. Dearholt

MS, University of Maryland, 1989

BS, University of Maryland, 1979

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2019

Abstract

An estimated 33% to 54% of hospital nurses exhibit signs of emotional stress and decreased well-being, which is associated with a negative impact on nurses' health, job performance, patient care outcomes, and healthcare cost. This project sought to improve nurse well-being by providing nurses with education on mindfulness-based practices. The practice question addressed whether implementing a mindfulness-based education strategy for nurses improved nurse well-being. Three models informed this project: the health promotion model, the andragogical model, and Kirkpatrick's 4 levels of training evaluation. Sources of evidence included the Maslach Burnout Inventory (MBI) and a knowledge assessment administered to 10 registered nurse participants before and after a 6-week education program. An overall evaluation was also given at the end of the program. Analytical strategies included frequency distributions for demographics and program evaluation as well as measuring the mean difference between pre- and postscores using a paired *t* test for the MBI and the knowledge assessment. The results of this project demonstrated a significant improvement between pre- and postscores for basic knowledge of mindfulness practices ($p = .004$), confidence in performing mindfulness practices ($p = .001$), ability to apply mindfulness practices in the work setting ($p = .004$), participant's belief that applying mindfulness practices supports self-care ($p = .013$), and improvement in emotional exhaustion ($p = .025$). The implications are that teaching nurses mindfulness strategies can decrease emotional exhaustion and stress. Recommendations are to continue this program. The positive impact on social change included improved nurse well-being leading to better patient outcomes.

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Dedication

This project is dedicated to the nurses at the project organization, whose hard work; dedication; and professional, evidence-based practice serves to provide the highest quality of care to patients and families on a daily basis.

Acknowledgments

I would like to acknowledge my Doctor of Nursing Practice (DNP) preceptor, Deborah Dang, PhD, RN, NEA-BC, for her support during my DNP journey. Dr. Dang has been not only a preceptor, but also a caring coach, mentor, and friend over the past 29 years. Her willingness to share her knowledge, and her guidance, has made a significant impact on my nursing career for which I will always be grateful.

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Section 1: Nature of the Project

Introduction

Nurses constitute the largest workforce in healthcare, exceeding 3 million individuals (Bureau of Labor Statistics, 2019; Institute of Medicine, 2010). The care nurses provide can be seen in almost every setting where healthcare is delivered. Within healthcare, nursing has been found to be one of the most stressful professions (Chana, Kennedy, & Chessell, 2015; Roberts & Grubb, 2014). Work stress (i.e., a type of emotional stress), coping strategies, and self-efficacy have been found to be significantly correlated with nursing staff's level of well-being (Chana et al., 2015). According to Koinis et al. (2015), professions such as nursing are inherently stressful due to the frequency of close human involvement and the need for rapid decision-making that may have serious implications. Decreased well-being presents a major problem for both nursing and healthcare in that it has been associated with poor job satisfaction, decreased quality in work relationships and collaboration, lack of engagement, decreased caring behaviors, absenteeism, intent to leave the profession, and increased errors (Chana et al., 2015; Hall, Johnson, Watt, Tsipa, & O'Connor, 2016).

The aim of this DNP project was to improve nurse well-being through a mindfulness-based education strategy to aid nurses in more effectively managing their stress. Mindfulness-based strategies, such as meditation, have been shown to decrease nurse stress that contributes to increases in nurse well-being (Bazarko, Cate, Azocar, & Kreitzer, 2013; Guillaumie, Boiral, & Champagne, 2016). Stress can impact psychological well-being and have a negative effect on clinical performance

(McConville, McAleer, & Hahne, 2017). Higher levels of mindfulness have been associated with decreased stress, anxiety, and depression as well as more adaptive coping strategies, perception of stress, and the ability to see situations more clearly and respond more effectively (McConville et al., 2017).

This project supported positive social change by helping to ensure a healthy and engaged nursing workforce that is able to provide safe and high quality patient care. Increasing nurse well-being improves the physical, psychosocial, and mental health of the nursing workforce as well as the care and well-being of patients and families. An analysis of healthcare staff well-being in the United Kingdom by the Department of Health (2009) concluded that patient satisfaction was markedly higher in trusts where staff health and well-being were also reported as high. In addition, improving nurse well-being has the potential to positively impact the number of nurses intending to leave the nursing profession (Laschinger & Fida, 2014).

Problem Statement

The local nursing practice problem that was the focus of this DNP project was low nurse well-being scores that were impacted by the stress and emotional exhaustion experienced by nursing staff. Cross-national research findings from studies in the United States, Canada, and the United Kingdom have identified that approximately 33% to 54% of hospital nurses exhibited burnout (i.e., emotional exhaustion as measured by the Maslach Burnout Inventory [MBI]) scores higher than the published norm for medical personnel (Aiken, Clarke, & Sloane, 2002; Chana et al., 2015). According to Van Camp and Chappy (2017), an estimated 35% to 60% of nurses separate from their first nursing

job during the initial year of employment. Decreased well-being related to emotional exhaustion has also been associated with nurses' intent to leave their jobs and decreased organizational commitment (Laschinger & Fida, 2014). Within the local organization, the turnover rate has continued to increase to the current rate of 14% turnover for nurses. In exit interviews, nurses have reported feeling emotionally and physically exhausted (i.e., burned out). In addition, nurse's well-being (i.e., emotional exhaustion) scores decreased from 45% in 2015 to 41% in 2018, as measured by the Safety Attitudes Questionnaire (Sexton et al., 2006). These results are 17 percentage points lower than the industry standard of 58%. Given these data the issue was an important problem for nursing and the local organization to address.

This project was significant for the field of nursing practice because nursing is a discipline based on caring. According to a study by Chana et al. (2015), caring behaviors were correlated with nurses' coping strategies and self-efficacy. In addition, stress at work, the ability to cope, and self-efficacy significantly correlated with nurses' level of burnout and emotional distress. This project was aimed at improving nurse well-being through a mindfulness-based education strategy in order to impact the nurses' ability to cope with stress more effectively, improving the quality of nursing care provided.

Purpose

The gap in practice that was addressed through this educational DNP project is the lack of strategies to aid nurses in more effectively managing emotional stress in order to improve their well-being. Although multiple research studies have confirmed the existence of stress in the nurse's work environment and the impact of that stress on the

nurses' physical and emotional well-being, few evidence-based, effective stress reduction programs have been designed to help nurses in the clinical setting (Chesak et al., 2015; Koinis et al., 2015). The purpose of the project was to improve nurse well-being through a mindfulness-based education strategy to enable nurses to more effectively manage their stress. The guiding practice-focused question for this DNP project was: Does implementing a mindfulness-based education strategy for nursing staff improve nurse well-being? This DNP project addressed the gap in practice because mindfulness-based strategies, such as meditation, have been shown to decrease nurse stress which contributes to increases in nurse well-being (Bazarko et al., 2013; Guillaumie et al., 2016). Mindfulness-based strategies have also been associated with significant improvements in general health and the ability to be able to connect more effectively with colleagues and patients as well as decreased stress and burnout symptoms (Bazarko et al., 2013; Hunter, Snow, & Warriner, 2017).

Nature of the Doctoral Project

The sources of evidence that I used in this project included research articles (i.e., with quantitative, qualitative, and mixed methods approaches) obtained from peer-reviewed journals published within the last 5 years. Earlier seminal research was used to provide the background evidence for this project. Articles were obtained through a comprehensive search of the literature. In addition, standards for nursing workplace well-being, safety, and health from national and international healthcare organizations were reviewed. Other sources of evidence included the review of internal and external data and feedback from experts on well-being and/or mindfulness practices, both internal

and external to the local organization. In this DNP project, I used the organization's nursing evidence-based practice model, evidence summary tool, and evidence level hierarchy and quality guidelines to organize and analyze the evidence (see Dang & Dearholt, 2018).

The purpose of this DNP project was to improve nurse well-being through a mindfulness-based education strategy. Mindfulness-based programs have been shown to decrease stress, which positively impacts nurse well-being (Bazarko et al., 2013; Guillaumie et al, 2016). In a quasi-experimental study of 41 nurses that participated in an 8-week mindfulness-based, stress reduction course, participants reported significant improvements in general health and decreased stress and burnout symptoms (Bazarko et al., 2013). In a qualitative study conducted by Hunter et al. (2017), nine nurse midwives participated in eight 60- to 90-minute sessions on mindfulness practices followed by an interview. Emergent themes from their study included feeling calmer and more at peace as a result of training; practice required commitment; a better connection to self; the ability to gather thoughts and letting go of stress; reconnecting to self, colleagues, and patients; and confidence in incorporating practice into their lives.

The approach that I used for this DNP project design was the implementation of a 6-week, mindfulness-based, stress management program that was provided either on or close by the participating nursing units. Each session was 30 to 45 minutes in length and included educational content on mindfulness concepts, principles, and techniques as well as evidence supporting mindfulness practices. Each session also included time for participants to share reflections related to the experiences encountered over the past week

in applying practices within the work setting. Participants were asked to practice the techniques taught in each class over the next week for at least 5 minutes each day and were encouraged to keep a journal of these activities that they could refer to in class. Participants were asked to attend all six sessions and complete a pre- and post-well-being measurement tool and a pre- and postknowledge assessment. A postprogram evaluation was also completed (i.e., summative evaluation) to determine if objectives had been met and if program improvements needed to be made. The pre- and post-well-being measurement tool that I used in this study was the MBI, which measures emotional exhaustion, depersonalization, and personal accomplishments (see Pisanti, Lombardo, Lucindi, Violani, & Lazzari, 2012). The MBI is a reliable and valid tool that has been widely and internationally used as a tool to measure burnout and work-related dimensions of well-being (National Academy of Medicine, 2018).

I used Kirkpatrick's four levels of training evaluation as a model to guide the program's evaluation process. The levels in this evaluation include (a) Level I, Reaction: an evaluation of how favorable participants find the training and if it is relevant to their jobs; (b) Level 2, Learning: how well participants take in the new knowledge and skills, including attitude, confidence, and commitment in participation; (c) Level 3, Behavior: how well participants can apply what they have learned on the job; and (d) Level 4, Results: the degree to which targeted outcomes were met posttraining (Kirkpatrick & Kirkpatrick, 2016). The model provided a structure for obtaining feedback for improving the program, optimizing learning and for demonstrating the program's value.

I developed the educational planning and content using Knowles' core adult learning principles, including the learner's need to know; self-directed learning (i.e., self-concept); prior experience as a learner; and learning readiness, orientation, and motivation (see Knowles, Holton, & Swanson, 2015). The health promotion model was also used to guide the evaluation of factors that influence health behaviors, such as mindfulness practices. Key concepts included individual experiences and characteristics with the behavior and behavior-specific cognitions (i.e., perceived benefits and barriers, self-efficacy, and interpersonal and situational influences) related to the participant's behavioral outcome (see McEwen & Wills, 2014).

Significance

A stakeholder can be defined as a person, group, or department in an organization that has an interest in or a concern about the topic, decision, or project under consideration and the evidence that supports it (Agency for Healthcare Research and Quality, 2014; Dang & Dearholt, 2018). For this DNP project, bedside nursing clinicians; nurse managers; directors of nursing; hospital leadership; physicians; other healthcare team members (e.g., respiratory therapists, social workers, nutrition specialists, clinical pharmacists, etc.), and patients were identified as key stakeholders. Bedside nursing clinicians were impacted through this project by experiencing improved coping skills and well-being (Guillaumie et al., 2016). Nurse managers, directors of nursing, and hospital leadership potentially will experience a more engaged and collaborative staff with greater nursing retention (see Chana et al., 2015; Guillaumie et al., 2016; Romppanen & Haggman-Laitila, 2016,). Physicians and healthcare team

members will potentially experience improved collaboration and communication (see Romppanen & Haggman-Laitila, 2016). Lastly, patients will receive enhanced caring behaviors from bedside nursing clinicians who participated in the program (see Chana et al., 2015). In addition, nurses who possess good well-being while at work are more likely to be efficient and to achieve positive patient outcomes (Romppanen & Haggman-Laitila, 2016).

This DNP project contributed to nursing practice by promoting nurse well-being, which has the potential to positively impact nursing job satisfaction and the quality of team relationships and collaboration as well as decrease nurses' intentions to separate from their job or the profession altogether (see Romppanen & Haggman-Laitila, 2016). Improving nurse well-being has also been linked to decreases in absenteeism and depression (Romppanen & Haggman-Laitila, 2016). Additionally, increasing nurse well-being has the possibility of improving patient safety outcomes, including decreasing errors (Hall et al., 2016). Most importantly, Chana et al. (2015) found that nurse caring behaviors were correlated to the nurses' ability to manage stress. A strong link has also been seen between the well-being of staff and the patient's well-being (Department of Health, 2009).

Increasing nurse well-being through mindfulness-based strategies is transferable to all healthcare staff that provides care to patients and families. As a group, healthcare workers suffer from occupational stress. According to Routsalainen, Verbeek, Marine, and Serra (2015), this occurs because healthcare workers often have to meet high demands while not having enough time, skills, or support on the job. As a result,

healthcare workers can experience severe distress and even physical illness. Physicians, in particular, experience high rates of stress with 10% to 20% experiencing depression, and 50% reporting symptoms of burnout, stress, and fatigue (Dyrbye, Satele, Sloan, & Shanafelt, 2011).

This project supported positive social change by helping to ensure a healthy and engaged nursing workforce that is able to provide care that is safe and supports quality outcomes. In addition, in light of the role that new nursing graduates have related to sustaining the future nursing workforce, it is critical for new nurses to be able to effectively manage stress and prevent emotional exhaustion (Laschinger & Fida, 2014). According to the Walden University (2018) mission statement, positive social change results in the improvement of the social and human condition. Increasing nurse well-being improves the physical, psychosocial, and mental health of the nursing workforce as well as the care and well-being of patients and families.

Summary

In Section 1 of this paper, I introduced the importance of increasing nurse well-being through the use of mindfulness-based stress reduction interventions along with the negative consequences of poor nurse well-being and its impact on the nurse, organization, patient outcomes, and patient care. I also identified the gap in knowledge that this project addressed: nurses' lack of knowledge and skills needed to effectively manage work-related stress in order to improve well-being. Key stakeholders and how they are impacted by this project were also discussed. In Section 2 of this paper, I will delve into

the background and context of this DNP project as well as my role and that of the project team.

Section 2: Background and Context

Introduction

The practice problem addressed through this DNP project was the need to improve nurse well-being by providing nurses with mindfulness-based strategies so they can more effectively manage their emotional stress. The practice-focused question was: Does implementing a mindfulness-based education strategy for nursing staff improve nurse well-being? Nursing is a highly stressful profession due to multiple causes, such as frequent contact with patients and families, the need to respond rapidly and make decisions in emergent situations, long work hours, short staffing, managing patient's pain, intervening in cases of loss, providing comfort, administering interventions, and aiding with emotional suffering (Botha, Gwin, & Purpora, 2015; Koinis et al., 2015). According to Botha et al. (2015), stress has been shown to affect high-level cognitive functions, such as memory and attention, that can negatively impact nurses' ability to respond to challenging situations accurately while using sound decision-making and in a timely fashion. Work stress and coping strategies have been significantly correlated to nurses' level of well-being (Chana et al., 2015). Decreased well-being is a significant issue for both nursing and healthcare organizations in that it has been associated with decreased job performance, engagement, job satisfaction, work relationships and collaboration, and caring behaviors towards patients/families as well as an increased likelihood of committing an error (Chana et al., 2015; Hall et al., 2016). To help address this significant problem, I developed this doctoral project to improve nurse well-being through a mindfulness-based education strategy. By teaching nurses mindfulness-based

knowledge and skills, nurses are enabled to more effectively manage stress, particularly emotional and work related.

In Section 2, I discuss key concepts related to mindfulness practices and models and theories that supported this project. This section also includes a discussion of the relevance to nursing practice, both the current state and history of the broader problem. The local background and context that prompted this project are discussed in addition to my role and that of the project team.

Concepts, Models, and Theories

Several key concepts, models, and theories are important to the understanding of well-being, mindfulness, and stress reduction. The first is the determination of what well-being actually is. This is somewhat difficult because currently there is no one accepted definition for the term well-being. According to Cooke, Melchert, and Connor (2016), there has been a long-standing, unresolved discourse regarding how to properly conceptualize and measure well-being. The authors suggested that there are four broad approaches: (a) the hedonic philosophy, which focuses on happiness, pleasure, satisfaction with life, and experiencing positive affect and lack of negative affect; (b) the eudaimonic approach, which depicts psychological health as being obtained by an individual fulfilling their potential, maintaining a top level of functioning, or understanding their true nature; (c) a focus on quality of life, which includes social, physical, and psychological components of functioning; and (d) a focus on wellness that is much less clearly defined.

Kiefer (2008) conducted a review of the concept of well-being using an integrated approach and concluded that well-being can be defined by a person's mental, social, physical, and environmental standing and that each of these aspects interconnects with another producing varying levels of personal impact. However, Kiefer suggested that the term well-being, when used in the literature, is often assumed and is used interchangeably with similar terms. The American Nurses Association (2018), in their healthy nurse initiative, appeared to take this approach and proposed that the idea of well-being is associated with being a healthy nurse, described as a nurse who focuses on five domains including, (a) activity; (b) rest; (c) nutrition; (d) quality of life; (e) safety. For their work in developing the organization's *Healthy Work Environments Best Practice Guidelines* (2008), the Registered Nurses Association of Ontario defined well-being in broad terms as "the extent to which a person is able to experience physical, mental, and psychological health" (p. 19), and psychological (i.e., emotional) well-being as "the extent to which a person feels enthusiastic, active, and alert" (p. 19). For the purposes of this project, I used the RNO definition.

The next important concept is that of mindfulness. A clinical mindfulness expert, professor emeritus at the University of Massachusetts Medical School, and founding executive director of the Center for Mindfulness in Medicine, Healthcare, and Society defined mindfulness as having an awareness that emerges from paying attention purposefully, in the current moment, nonjudgmentally (Paulson, Davidson, Jha, & Kabat-Zinn, 2013). According to Ludwig and Kabat-Zinn (2008), the goal of mindfulness is for a person to keep awareness moment by moment, disconnecting themselves from strong

attachment to thoughts, emotions, and beliefs in order to develop a greater sense of psychological balance. Cultivating mindfulness includes both formal and informal practice geared towards bringing an individual's awareness into all aspects of their life (Birtwell, Williams, Van Marwijk, Armitage, & Sheffield, 2019). Mindfulness-based stress reduction (MBSR) was originally developed by Kabat-Zinn in 1979 as an 8-week, evidence-based intervention to teach patients mindfulness meditation, breath work, mindful yoga movement, and relaxation (Bazarko et al., 2013). The program was used to teach patients with chronic healthcare conditions how to live fuller, healthier lives (Bazarko et al., 2013; Ludwig & Kabat-Zinn, 2008). Since then, studies have repeatedly demonstrated the positive impact of MBSR on health and well-being, including improving depression and the ability to cope and decreasing anxiety (Bazarko et al., 2013; Hunter et al., 2017). With regard to healthcare workers, MBSR has been shown to positively impact well-being by reducing anxiety and stress, improving positive affect, and decreasing emotional exhaustion (Bazarko et al., 2013). In a classic study on changes in the brain and immune system functioning after completing MBSR training, Davidson et al. (2013) found that increases in left-sided anterior activation linked to affect positivity and significant increases in antibodies postinfluenza vaccine administration occurred in course participants compared with the nonparticipant control group. In addition, the amount of increase in left-sided anterior activation indicated the amount of antibody production (Davidson et al., 2013). The findings of their study suggested that even practicing mindfulness-based interventions for a short time can yield significant improvement in positive affect and an individual's health.

In this DNP project, I used mindfulness-based strategies that were modeled after the current University of Massachusetts Medical School, Center for Mindfulness in Medicine, Health Care, and Society MBSR Curriculum (2017). Topics included awareness of breathing (i.e., focused breathing) meditation, body scan meditation, loving kindness meditation, mindfulness eating, mindfulness movement, gratitude meditation, self-compassion, and reflection practices. The background and research that supported these practices was included in the program content.

The third key concept is that of stress. Stress can be described as an emotional experience that is linked to biochemical, behavioral, and physiological characteristics, which are often described as feelings of being overwhelmed, anxious, or feeling tired and run-down (American Psychological Association, 2018). While some amounts of stress are beneficial, extreme amounts of stress that extends over long periods of time (i.e., chronic stress) can have negative consequences to health and impact various systems, such as immune, cardiovascular, neuroendocrine, and central nervous functioning (American Psychological Association, 2018). Work-related stress is a general term that refers to stimuli in the workplace that leads to physical, psychological, or behavioral sequelae that impacts the health and well-being of the employee and the institution (Glazer & Liu, 2017). According to Glazer & Lui (2017) stress can also result in negative responses and reactions observed in individuals. Psychological/emotional stress refers to the psychological experience of demands at work that have a social element such as conflict between other individuals (Glazer & Lui, 2017). Job stress, a type of emotional stress, can be described as the detrimental physical and emotional response

that occurs when a person perceives that job demands exceed their capabilities and resources (Guillaumie et al., 2016). For nurses this may include such factors as workload, poor relationships with managers or colleagues, the emotions involved in caring, lack of rewards, and rotating shifts (Guillaumie et al., 2016).

Two additional terms related to stress are coping and stress management. Coping is defined as an individual's efforts, often learned, to master the demands perceived as taxing personal resources (Glazer & Liu, 2017). The term stress management refers to interventions that are employed by an individual to treat or repair harmful effects of stress that are not coped with sufficiently (Glazer & Liu, 2017).

There were three models that guided this DNP project: the health promotion model, the andragogical (i.e., adult learning) model, and Kirkpatrick's four levels of training evaluation. The health promotion model, which combines both nursing and behavioral sciences perspectives, served as a guide to assess the factors that motivated participants to engage in meditation to enhance their health through mindfulness-based practices (see McEwen & Wills, 2014). According to McEwen and Wills (2014), the model has been extensively used by researchers as a guide for predicting the use of health promoting behaviors. The model consists of seven behavior-specific cognitions and affect factors that are amenable to change that can predict the likelihood of the performance of the health-promoting behaviors (Pender, Walker, Sechrist, & Stromborg, 1990). These behaviors are impacted by prior related behaviors such as experience with the same or similar health behaviors in the past and personal factors, such as ethnicity, personality, socioeconomics, and age (Pender, 2011). As they relate to mindfulness-

based practices, the seven amenable factors include whether or not the individual considers mindfulness practices beneficial; barriers that might prevent practice, such as time and space; perceived self-efficacy to perform the practice; the subjective emotional state of the individual during and after practice; interpersonal influences, such as peer or leader support; and situational influences, such as compatibility with life style, the individual's commitment to action, or any other competing demands or preferences (Pender et al., 1990). Assessing these factors can help to provide valuable information related to teaching mindfulness-based skills and practices to the project participants.

The second model was the andragogical/adult learning model. The term andragogy can be referred to as the art and science of assisting adults to learn as envisioned by Knowles (Bastable, 2014). Knowles's framework includes the assumptions that adults are self-directed, goal-oriented, independent learners; previous experiences serve as a rich reservoir for learning; and readiness to learn is enhanced if geared towards developmental tasks and if the knowledge can be immediately applied (Bastable, 2014). The andragogical approach to teaching and learning includes considerations such as preparing the learner with what they need to know; providing a relaxed, mutually respectful, collaborative environment; and involving the learner in planning, diagnosing needs, developing objectives and the program evaluation (Bastable, 2014: Knowles et al., 2015). The rationale for including this model is that when planning, implementing, and evaluating educational programs, it is necessary to carefully consider the qualities of the learners; their physical, psychosocial, and cognitive development; the role of the educator and learner; the specific learner needs; and the

teaching learning process in order to ensure that the program is successful (Bastable, 2014).

The third model is Kirkpatrick's four levels of training evaluation. The model was developed during the 1950s by Kirkpatrick in order to provide a framework for determining if training programs were making a difference for participants (Kirkpatrick & Kirkpatrick, 2016). Recent revisions to the model have identified the need to put focus on the evaluation of the importance of training to the organization. The four levels of training evaluation include (a) reaction, to what extent participants find the training favorable, relevant to their jobs, and engaging; (b) learning, the extent to which participants take in knowledge, skills, new attitudes, and a commitment based on participation; (c) behavior, the extent to which participants apply learning on the job; and (d) results, the extent to which the targeted outcomes are achieved (see Kirkpatrick & Kirkpatrick, 2016). Recent revisions to the model suggested that the order of this model should be reversed to begin with Level IV in order to keep the focus on outcomes (Kirkpatrick & Kirkpatrick, 2016).

For this DNP project, Level I was evaluated through both a formative and summative evaluation approach. The formative approach was through the weekly reflections of participants in class regarding their experiences and insights in using these practices within the clinical environment, as well as, a brief weekly class evaluation . The summative approach was through the use of a postprogram survey in which the participants provided feedback regarding their satisfaction with the program (Level I), the instructor, the location, and timing. The postprogram evaluation included questions to

evaluate Level II by asking participants to rate their level of basic knowledge related to mindfulness practices, confidence in performing mindfulness practices, ability to apply practices in the work setting, worth of applying practices in the work setting and if their knowledge in mindfulness practices had increased. Level III was evaluated in the postprogram evaluation and included two questions on successful application of practice on the nursing unit and if the participant was able to better manage his/her stress. Level IV was measured through the completion of the Maslach Burnout Inventory (see Pisanti et al., 2012) pre- and postprogram. A knowledge evaluation administered preprogram consisted of the same questions related to mindfulness practices that were used in the postprogram evaluation under Level II with the exception of if the participant's knowledge had increased as a result of the program. The rationale for using this model was that it provided a time-tested framework for improving an educational program, maximized the transfer of learning to behavioral change, and provided a way to show the value of training to the organization (Kirkpatrick & Kirkpatrick, 2016).

Relevance to Nursing Practice

Improving nurse well-being is part of the broader problem of exposure of healthcare workers to work-related stress. According to Ruotsalainen et al. (2015), healthcare workers often face work stress as a result of high expectations, not enough time, or social support at work leading to stress and burnout. As a result, healthcare workers may be unsuccessful in providing quality care services, incur increased sick time or leave the organization (Ruotsalainen et al., 2015). Nursing has been found to be one of the most stressful healthcare professions, with 50% of the emotional exhaustion

encountered by nurses predicted by high work pressures, lack of social support, high task orientation, and fewer years in nursing (Chana et al., 2015). Chana et al. (2015), conducted a cross-sectional, correlation-based survey which studied 102 nurses in the United Kingdom. Work stressors, coping strategies and self-efficacy were found to significantly correlate with nursing staff's level of well-being. Hall et al. (2016) conducted a systematic review composed of quantitative studies pertaining to healthcare staff well-being, safety and burnout. Their findings based on a review of 46 studies indicated that low well-being and middle to high levels of emotional exhaustion was associated with poor patient safety outcomes, including medical errors.

Decreased nursing well-being has developed as a major problem facing healthcare organizations and nursing. Low nurse well-being has been associated with poor job satisfaction, absenteeism, turnover decreased quality of workplace relationships, lack of engagement, decreases in caring behaviors and poor patient outcomes, and patient and staff safety (Chana et al., 2015). It is estimated that 35%-65% of nurses leave their jobs within the initial year of employment at a cost that can reach as high as $82,000 per nurse (Setter, Walker, Connelly, & Peterman, 2011; Van Camp & Chappy, 2017).

Within the last 5 years there have been a number of studies that have examined the use of interventions that help to improve nurse well-being. It has been suggested that since multiple factors have been associated with nurses' level of burnout and psychological distress/stress, an integrated approach is needed when making attempts to improve staff well-being (Chana et al., 2015). Depending on the work setting and the particular stressors in the environment, differences in expected outcomes may occur if the

intervention does not meet the need or is not a good fit for the staff in a particular work environment. According to the World Health Organization's Healthy Workplace Framework and Model (Burton, 2010), in order to support the complete well-being of workers, four avenues should be considered. These include physical and psychosocial work environments, personal health resources and community involvement, each intercepting and overlapping. A key tenant of the model is that in order to address these areas, interventions should be built on the needs and preferences determined by an assessment that involves discussion with staff. Since low nurse well-being has been reported by staff through the Safety Attitude Questionnaire (Sexton et al., 2006) administered by the organization, the focus of this DNP project was to improve nurse well-being which falls into the category of psychological work environment.

In a study conducted by Laschinger and Fida (2014) to improve the well-being of new nurses, 205 new nursing graduates were studied over their first year of employment examining the effects of authentic leadership (positive-focused leadership style) and psychological capital (positive human strengths and psychological capacities). The results suggested that both personal and institutional resources were important in shielding new nurses from burnout and its adverse impact on mental health and work outcomes. Romppanen and Haggman-Laitila (2016) conducted a quantitative systematic review looking at interventions focused on improving nurse well-being in the workplace. Eight studies were examined ranging from 2009-2015. Study interventions were categorized as, (a) person-directed (e.g., stress management, resilience building, cognitive behavioral skills); (b) organization-directed (e.g., improving work conditions,

work environment, work methods, clinical supervision); (c) a combination (e.g., collegial interactions training, development of stress management and working conditions). All but one intervention yielded statistically significant results related to improving nursing well-being pointing out the importance of well-being initiatives in the workplace. Meng, Luo, Liu, Hu, and Yu (2015) conducted a study with nursing staff that examined nine dimensions that comprise happiness. Of these dimensions, positive emotions, satisfaction with life, negative emotions and relationships with friends comprised 47.8% of the happiness index, which could indicate that interventions focused on these areas may increase nursing well-being.

A number of studies have also been conducted looking at improving nurse well-being through mindfulness-based interventions. One example is a mixed-methods systematic review of the impact of mindfulness on nurses, conducted by Guillaumie et al. (2016). In this study, researchers examined a total of 32 quantitative and qualitative studies, five of which were conducted between 2012 and 2013. Results of the systematic review indicated that mindfulness seemed to improve nurses' psychological health, well-being, and workplace performance. Meta-analysis suggested mindfulness-based strategies may be beneficial in significantly reducing depression and anxiety, while qualitative studies indicated increases in calmness, awareness, enthusiasm, improved work performance, better communication with colleagues, clearer analysis of complex problems and emotional regulation. Bazarko et al. (2013) found that at the conclusion of an 8-week course on mindfulness-based stress reduction, participants showed improvement in general health, less stress, and a decrease in burnout symptoms. This

study also showed that the results could be sustained over a 4-month period. Grover, Teo, Pick and Roche (2017) surveyed 1250 nurses in Australia to examine emotional demands, job control, mindfulness, perceived autonomy support and psychological stress. Their findings suggested that mindfulness helped to reduce stress through multiple means such as reducing the perception of job demands and decreasing their influence. Kim et al. (2013) conducted a randomized controlled trial with nurses that rated positive for symptoms of post-traumatic stress disorder. At the conclusion of an 8-week mindfulness-based exercise intervention, participants' post-traumatic stress disorder ratings improved as did their cortisol levels. In another study by Kinman and Leggetter (2016), nursing students who had been working in the hospital setting were asked to complete a questionnaire related to the effects of emotional labor. Emotional labor can be defined as the work related to managing feelings when the work role dictates that certain emotions should not be displayed. Emotional labor is generally seen in jobs, such as nursing, in which there is intensive contact with the public, a need to create an emotional state in others, and a set of explicit or implicit rules regarding the types of emotions that are appropriate and inappropriate. The study identified a significant association between emotional labor and emotional exhaustion in nurses, and also a negative relationship between emotional support and emotional-focused coping and exhaustion. Hunter et al., (2017) conducted a study that used eight, 60-90 minute sessions of mindfulness practices completed by nurse midwives in the United Kingdom. Several themes emerged as a result which included commitment to practice and sometimes feeling challenged or uncomfortable during sessions. Overall, however, participants reported a sense of

calmness, better ability to connect with colleagues and women in their care, and in being able to let go of stress. At the end of the sessions, they also reported feeling confident to continue mindfulness practices. Steinberg, Klatt, and Duchemin (2017) conducted a study with nursing staff that consisted of eight sessions of mindfulness-based meditation, mild yoga, and music as interventions. Results of the study demonstrated that work satisfaction increased significantly in the experimental group, with no change in the control group. Yang, Tang, and Zhou (2018) conducted a study of 100 psychiatric nurses in the Hunan Province of China. Participants participated in weekly guided meditation sessions from August 2017 through November 2017. Postintervention, mental health, anxiety, and depression scores were significantly lower than the control group and lower than preintervention. Daigle, Talbot, and French (2018) conducted a study of 75 nurses, 38 of which were in the intervention group and received 8-weeks of mindfulness-based stress reduction classes. The intervention group demonstrated a significant decrease in stress with the majority reporting satisfaction with treatment. They also perceived improvement in problems with making errors which was maintained when remeasured in 3 months. Lastly, Van der Riet, Levett-Jones, and Aquino-Russell (2018) performed an integrative review of 20 qualitative and quantitative studies ranging from 2004-2017. The results of this study concluded that mindfulness-based mediation had a positive impact on stress, anxiety, depression, well-being, empathy and burnout.

Fourteen research studies were included as sources of evidence for this DNP project. Four studies were Level I, experimental, two were Level II, quasi-experimental and eight were Level III nonexperimental based on the organization's evidence level and

quality guide (see Dang & Dearholt, 2018). All studies were rated as good in quality except for one that was rated high, and all used reliable and valid measurement tools as appropriate. However, a number of limitations pertaining to the evidence were noted. These included that, (a) there were a limited number of experimental studies; (b) studies had small sample sizes; (c) there was little consistency in measurement tools used across studies; (d) only one study repeated measurement over time; (e) there was limited standardization across mindfulness-based interventions. As a result, there are considerable limitations to generalizability.

This doctoral project advances nursing practice by helping to ensure a healthier and more engaged nursing workforce capable of producing the very best patient outcomes including safe, effective, and efficient patient care. The project also has the potential to decrease nurse turnover and the number of nurses that want to leave the nursing profession. Additionally, there may be the potential to decrease costs related to nursing orientation and absenteeism providing a financial benefit to the organization.

Local Background and Context

The local evidence that supports this DNP project to improve nurse well-being through a mindfulness-based strategy is two-fold. First, despite multiple efforts to improve nurse well-being within the DNP project organization, the nursing staff has continued to report low well-being scores on the biannual organization administered Safety Attitudes Questionnaire (Sexton et al., 2006). Scores for 2015 were 45% and for 2016 were 41%. The Safety Attitudes Survey measures well-being related to both emotional exhaustion and resilience. Second, the organization's external nurse turnover

rate has increased from 8.2% in fiscal year 2012 to an all-time high of 14% in 2018. The national turnover rate for registered nurses in the north east region is currently 16.6% and although this organization's rate is lower, there is still much concern since the organization has experienced a steady increase over the past 5 years (Nursing Solutions, Inc, 2018). In addition, on exit interview, nurses report leaving the organization because they feel exhausted and burned out with the patient volumes, rapid flow of patients, and the patient acuity. Some nurses have even expressed that they are considering leaving nursing as a profession.

In terms of the context of the DNP project organization, the organization has demonstrated a desire to create a healthier and supportive work environment for all staff. A nursing residency program has been in place for several years that provides education and support for new nurses over their first year of practice. The organization has conducted focus groups by outside consultants to obtain feedback from staff regarding how to improve the work environment. In response, changes have been made in how staff is scheduled to support less or no shift rotation. Initiatives are in place to ensure that all staff is able to take their breaks. This organization has also had a unit-based shared governance model since the early 1980s which enables staff input into decision-making. Recently hospital leadership has begun making rounds on off shifts, weekends, and holidays to get feedback from staff and to make sure that they have what they need to do their jobs effectively. The organization has respect and collegiality, being kind and listening to understand, and embracing others' unique skills and knowledge as core values. Additionally, it has invested in staff and rewarded healthy lifestyles, professional

development, mentoring, and advancement as strategic priorities. As a result, the DNP project on improving nurse well-being was aligned with the values and strategic priorities of the organization and helps support other existing programs and initiatives.

Role of the DNP Student

My professional context within the organization is that I am an assistant director of nursing and I consider it part of my job to support any initiatives to improve nurse well-being or to remove any barriers that might have a negative impact. Within my organization, I have attended or participated as a facilitator in a number of programs that support nurse well-being and resilience. I have also taught in the 1-day Psychiatry Nursing Resilience program. I have practiced meditation for the past 6 years and have had the opportunity to experience the benefits from MBSR training.

According to Walden University's (2017) *Manual for Staff Education Projects*, it is required that a partner organization will oversee the staff education activities conducted by the DNP student. As a DNP student, I have performed all planning, implementation, and evaluation activities related to the DNP project under the direction and oversight of the organization. This involved professional and ethical conduct at all times, and adherence to the policies and requirements of both Walden University and the organization. It also involved working with organizational leadership to obtain support, feedback and any permission that might be needed. I additionally needed to coordinate efforts to obtain any resources required and to work with a stakeholder committee (i.e., organizational leadership and end-users) that participated in the planning and evaluation of the program in collaboration with me. I was responsible for supporting the

organization in the recruitment of program participants and was also responsible for developing and providing the course materials. Any newly developed materials were reviewed by identified stakeholders and end-users. The program plan was verified with the organization and end-users through face-to-face discussion. I maintained confidentiality of any information and data gained during and after the program's completion, and was responsible for obtaining appropriate ethics approval at the site and through the Walden institutional review board. I additionally was responsible for communicating the results to stakeholders, leadership, end-users, and the organization, and for communicating through the DNP final project document following the DNP template and checklist. My motivation for completing this project was my genuine concern for the impact of stress on the health and well-being of nurses, and the belief that healthier, happier nurses provide better patient care, are able to be more present with patients and families, and are effective, supportive healthcare team members ultimately leading to the very best patient outcomes. In terms of personal perspectives that impacted this project, one was that I needed to recognize that mindfulness practices such as meditation are not equally effective for everyone and it takes time and commitment. Although mindfulness interventions appear easy, participants often find that practicing mindfulness is more difficult then it at first appears.

Role of the Project Team

With organizational oversight, a project team was formed consisting of nursing leadership and a minimum of one bed-side clinician to help plan and evaluate the DNP project. Team members participated in the development of the course objectives, class

design, location, and time requirement. The project team also participated in the development of the program's evaluation. Background information and evidence was provided to the team through a PowerPoint presentation and a review of the evidence that supported this project. A 1-hour overview class was presented to the project team which allowed them to experience what an actual class session looked like. The team will met twice in order to review progress and to allow for the opportunity for members to share their expertise and contextual insights. Team members were encouraged to use e-mail to provide feedback or share concerns if they arose between meetings. Team members were responsible for attending team meetings, attending the 1-hour overview session and providing feedback, actively participating in the planning and evaluation of the effectiveness/impact of the educational program and for supporting the recruitment and attendance of the participants in the program. Project team members were responsible for providing feedback on the doctoral project results within seven days of the distribution.

Summary

Section 2 of this paper outlined the concepts of well-being, mindfulness, and stress that are important to the understanding of this project to improve nurse well-being through the use of mindfulness-based strategies to enable nurses to more effectively manage stress. I used Kirkpatrick's four levels of training evaluation and Knowles's andragogical (i.e., adult learning) principles to support the planning and evaluation of the educational component of the project. The projects relevance to nursing was described including existing research and practices that have been used to improve nurse well-being. I concluded the section with a discussion of the local background and context, the

role of the DNP student in this project, and the role of the project team. In section 3 of this paper I will explore the sources of evidence that support the project, methods for the collection of predata within the organization, a discussion of how evidence will be gathered postproject and the analysis and synthesis of the evidence gathered postproject.

Section 3: Collection and Analysis of Evidence

Introduction

Decreased nurse well-being has been shown to have a negative impact on job satisfaction, nurse turnover, absenteeism, organizational commitment, quality of relationships, occurrence of medical errors, and even the provision of caring behaviors (Chana et al., 2015; Hall et al., 2016; Laschinger & Fida, 2014; Romppanen & Haggman-Laitila, 2016). An estimated 35% to 60% of nurses leave their first nursing job during the initial year of employment (Van Camp & Chappy, 2017). Cross-national research findings from studies in Canada, the United States and the United Kingdom have identified that approximately 33% to 54% of hospital nurses exhibited burnout (i.e., emotional exhaustion as measured by the MBI) scores, which is higher than the norm for medical personnel (Aiken et al., 2002; Chana et al., 2015). Additionally, decreased well-being related to emotional exhaustion has also been associated with nurses' intent to leave their jobs and decreased organizational commitment (Laschinger & Fida, 2014). As a result, the impact of nurse well-being can be costly not only to the nurse's physical and mental health but also to the organization through the increased costs of nurse turnover, increased errors, and decreased nursing productivity (Hall et al., 2016; Laschinger & Fida, 2014). Since decreased nurse well-being also affects the nurses' ability to be engaged and provide optimal caring behaviors, patients may also be impacted (Chana et al., 2015).

Improving nurse well-being is part of the broader problem of the exposure of healthcare workers to work-related stress. Nursing, in particular, has been found to be

one of the most stressful occupations, with 50% of the emotional exhaustion felt by nurses predicted by extensive work pressures, poor social support, high task orientation, and fewer years in nursing (Chana et al., 2015). Work stressors, coping strategies, and self-efficacy were found to significantly correlate with nursing staff's level of well-being (Chana et al., 2015). Mindfulness-based programs have been shown to decrease stress, the perception of job demands and influence of psychological stress, and anxiety and depression, which positively impacts nurse well-being (Bazarko et al., 2013; Grover et al., 2017; Guillaumie et al., 2016; Van der Riet et al., 2018). The purpose of this DNP project was to improve nurse well-being through a mindfulness-based education intervention.

The background and context of this project is related to two issues. The first was that despite multiple efforts to improve nurse well-being within the organization, the nursing staff continues to report low nurse well-being scores (i.e., 45% in 2015 and 41% in 2016). These nurse well-being scores are based on questions related to emotional exhaustion and resilience. The second issue was that the organization's external nurse turnover rate had increased from 8.2% in FY12 to an all-time high of 14% in 2018. Additionally, in exit interviews, nurses have reported leaving the organization because of feeling exhausted and burned out due to patient volumes, rapid flow of patients, and patient acuity. To address these issues and to maintain a nursing workforce with high well-being, the organization has demonstrated a strong commitment to create a healthier and supportive work environment for all staff.

In Section 3, I provide clarification related to the practice-focused question, purpose, and operational definitions. Sources of evidence are identified and linked to the purpose of the project. The relationship between the collection and analysis of evidence and the practice-focused question are discussed. This section also includes a description of how the evidence was collected and its analysis and synthesis.

Practice-Focused Question

The local nursing practice problem that was the focus of this DNP project is low nurse well-being scores that are impacted by stress and emotional exhaustion. The gap in practice that was addressed is the lack of interventions to aid nurses in more effectively managing emotional stress in order to improve their well-being. Although multiple research studies have confirmed the existence of high levels of nursing stress and the impact of stress on the physical and emotional well-being of nurses, few evidence-based, effective stress reduction programs have been designed to help nurses in the clinical setting (Chesak et al., 2015; Koinis et al., 2015). The practice-focused question that was addressed in this DNP project was: Does implementing a mindfulness-based education strategy for nursing staff improve nurse well-being?

The purpose of the project was to improve nurse well-being through a mindfulness-based education strategy to enable nurses to more effectively manage their stress. This approach aligned with the practice-focused question because mindfulness-based programs have been shown to decrease stress, which positively impacts nurse well-being (Bazarko et al., 2013; Guillaumie et al., 2016). For example, in a quasi-experimental study by Bazarko et al. (2013) nurse participants reported significant

improvements in general health as well as decreased stress and burnout symptoms. In another qualitative study by Hunter et al. (2017), nurse midwives reported feeling calmer and more at peace as a result of training; a better connection to self; increased ability to gather thoughts and to let go of stress; a better ability to reconnect to self, colleagues, and patients; and confidence in incorporating practice into their lives.

There are several key operational definitions that are referred to throughout the project. The first is well-being, which refers to a person's physical, mental, and psychological health (Registered Nurses' Association of Ontario, 2008). The second definition is psychological well-being, involving the ability to feel enthusiastic, active, and alert (Registered Nurses' Association of Ontario, 2008). The third key operational definition is mindfulness. Mindfulness incorporates awareness and purposefully paying attention, being nonjudgmental, with the goal of separating oneself from strong attachment to beliefs, thoughts, and emotions (Ludwig & Kabat-Zinn, 2008; Paulson et al., 2013). The fourth key operational definition is that of stress, which is an emotional experience often described as feelings of anxiety, tiredness, or feeling run-down (American Psychological Association, 2018). A related definition is work-related stress, referring to events in the workplace that lead to an impact on the health and well-being of an employee and the institution (Glazer & Liu, 2017). Psychological/emotional stress refers to the psychological experience when work demands have a social aspect like disagreements between individuals (Glazer & Liu, 2017). Emotional exhaustion refers to feelings of being emotionally overextended due to workload (Pisanti et al.,2012). Lastly,

the term stress management refers to strategies employed by an individual to repair harmful outcomes of stress (Glazer & Liu, 2017).

Sources of Evidence

The sources of evidence that I used to answer the practice-focused question included the MBI and a knowledge assessment administered before and after the 6-week mindfulness-based education program. The postknowledge assessment included a section on program evaluation that determined if the program objectives had been met and if there were program improvements that should be made.

The MBI is a well-established, 22-item, Likert-type inventory that has been used extensively over the past 25 years to measure emotional exhaustion, depersonalization, and personal accomplishments (Pisanti et al., 2012). It is a reliable and valid tool that has been widely used internationally to measure burnout and work-related dimensions of well-being (National Academy of Medicine, 2018). Emotional exhaustion measures an individual's feelings of being overextended and drained by their workload (Pisanti et al., 2012). Depersonalization measures a lack of or decrease in feeling often resulting in an impersonal response toward recipients of a person's services, and personal accomplishment measures an individual's feelings of being competent and successful with their work (Pisanti et al., 2012)

According to Lizano (2015), job burnout creates a risk to the psychological and behavioral well-being of individuals. It is theorized to effect workers well-being through the depletion of personal resources that leads to a decrease in an individual's physical, behavioral, and/or psychological state (Lizano, 2015). An expenditure of personal

resources occurs as an individual tries to manage chronic stress and feelings of exhaustion, resulting in fatigue and emotional decline (Lizano, 2015). This depletion of resources can lead to illness and can compromise the immune system (Lizano, 2015). The individual's response to burnout can also be seen behaviorally (e.g., through drinking or smoking as a means of coping with the stress; Lizano, 2015). In a systematic review of 19 empirical studies, Lizano indicated that job burnout presents a risk to the well-being of human service employees, and the evidence pointed specifically to the dangers of emotional exhaustion. The evidence also pointed to the need for effective interventions to relieve and prevent emotional exhaustion as being key to protecting well-being (Lizano, 2015). Improving nurse well-being through a mindfulness-based education strategy has been shown to be an effective strategy for decreasing nurses' stress.

I developed a preprogram knowledge evaluation and postprogram evaluation based on Kirkpatrick and Kirkpatrick's (2016) four levels of training evaluation. Learner-centered statements were developed in a survey format using a 4-point Likert scale. The postprogram evaluation evaluated reaction (i.e., Level I) using four questions to evaluate if the instructor's approach contributed to participants' learning, if the content was easy to follow, and if the room location and timing made attendance easier for participants. Learning (i.e., Level II) was evaluated using five questions in which participants evaluated their basic level of mindfulness knowledge; confidence in performing mindfulness practices; application of practices in the work setting; worthiness of applying mindfulness practices in the work setting; and if their knowledge level of mindfulness had improved as a result of the program. Behavior (i.e., Level III) was

evaluated using two questions to determine if mindfulness practices were applied successfully in the work setting and if participants felt they could manage their stress better as a result of employing mindfulness practices. I used the MBI to assess results (i.e., Level IV). The knowledge evaluation administered preprogram consisted of the same questions related to mindfulness practices that were used in the postprogram evaluation under learning with the exception of if the participant's knowledge had increased as a result of the program. In addition, a brief weekly evaluation was conducted at the end of each weekly class to evaluate satisfaction with the instructor's presentation style, class content, handouts, location, and time. I also provided a space to allow participants to comment or provide other suggestions that might improve the class.

The collection of the MBI results (see Appendix A) pre- and postprogram provided quantitative data regarding the impact of mindfulness interventions on improving nurse well-being scores as measured by the degree of emotional exhaustion, depersonalization, and perception of personal accomplishments experienced by participants. The evaluation of participants' reaction to the program, assessment of learning, impact on behavior, and the results provided valuable information about how to improve the program, maximize the transfer of learning to behaviors and subsequent organizational results to improve nurse well-being, and illustrate the importance of the program to the institution (see Kirkpatrick & Kirkpatrick, 2016).

Evidence Generated for the Doctoral Project

Participants

In the following section, I describe how evidence was collected to answer the practice-focused question of this project. In order to collect the evidence, participants needed to be recruited. The target audience was RNs who provided care at the bedside. The department of Neurosciences Nursing was selected because the department encompasses both critical care (i.e., a Neurology and Neurosurgery Critical Care Unit, a Brain Rescue Unit, and an Intermediate Care Unit) and two inpatient units. All units contain a mix of medical and surgical patients. Additionally, all units experience a high rate of patient flow with moderate to high daily occupancy rates and a high case-mix index. All three units have experienced turnover of nursing staff. Based on these characteristics and anecdotal feedback from staff and nurse managers, nurses on these units experience considerable stress during their workday and therefore, were selected as the target audience for this project. Twelve participants were recruited for this project. This was based on the projected number of staff that would be able to attend and classroom size. I recruited participants for the project using e-mail, flyers posted on the nursing units, and through their nurse managers and personal presentations at staff meetings and/or huddles on the nursing unit led by me.

Procedures

I used the MBI to measure the degree of emotional exhaustion, depersonalization and perception of personal accomplishments of participants. The 22 item inventory tool, with 5 graded Likert type responses for each item, was modified to include the term

patient which is the Human Services Survey for Medical (and Nursing) Personnel version. The tool has been validated for adult participants, specifically in human services/helping professions such as teachers, social workers, nurses, physicians, residents/fellows and medical students (National Academy of Medicine, 2018). The tool has been tested extensively for reliability and validity (Statistics Solutions, 2018). Pisanti et al. (2012) in their study involving Italian nurses and the psychometric properties for the MBI found that Crombach's alpha estimates were 0.88 for emotional exhaustion, 0.83 for personal accomplishments and 0.70 for depersonalization. I administered the MBI before and directly after the 6-week mindfulness-based education program. Higher scores in depersonalization and emotional exhaustion indicate a greater degree of burnout which decreases personal well-being. Higher scores in personal accomplishment indicate a lesser degree in burnout and a more positive impact on well-being.

I administered a preknowledge evaluation33 to participants before the start of the 6-week mindfulness-based education intervention. The knowledge evaluation questions were the same as the postevaluation learning questions. I administered a postprogram evaluation to determine if the instructor's approach contributed to participants' learning, if the content was easy to follow, and if the room location and timing made attendance easier for participants. For learning (Level II) I administered a five question evaluation in which participants rated their basic level of mindfulness knowledge; confidence in performing mindfulness practices; application of practices in the work setting; if applying mindfulness practices in the work setting supported self-care; and if participants' knowledge level of mindfulness had improved as a result of the program. An additional

two questions were added to evaluate behavior (Level III) to determine if mindfulness practices had been applied successfully in the work setting and if participants felt they could manage their stress better as a result of employing mindfulness practices. I also provided participants a brief evaluation at the end of each weekly class to determine satisfaction with the instructor's presentation style, class content, handouts, location and time. A space was provided to allow participants to comment on other suggestions that might have improved the class.

Protections

To ensure ethical protection of all participants in this project, participation was voluntary. Participants identified either verbally or through e-mail that they wanted to participate. I provided the volunteers with a fact sheet which described the program, number of sessions, length of sessions and requirements for participation. These requirements included attending all six class sessions, downloading two free apps with guided mediations, completing survey tools pre- and postprogram and committing to practice consisting of at least 5 minutes each day. The fact sheet also stated that participation was voluntary and that if for any reason participants wanted to withdraw from the program they could by notifying me. I did however recommend that participants complete any suggested weekly activities in addition to reflecting about their practice in writing a minimum of two times a week, but this was not required. Volunteers also needed to provide their e-mail address. The goal of providing this information was to ensure that all participants would be well informed regarding the class activities prior

to volunteering. I provided contact information and encouraged individuals who were considering participation in the program to contact me for any questions they might have.

All data collected as a result of this project were kept confidential and was stored in a locked office. I asked participants to self-assigned an identification (ID) number using the last four digits of a phone number of their choice. This ID number was used on all data collection instead of names. I kept the ID numbers of participants in a locked office along with any collected data for the life of the project. Access to this data was restricted to me and only to a limited number of others on a need-to-know basis. No names were used in connection to the data on any computer files. At the end of the project, all identification information and collected data will be destroyed through shredding. To provide an incentive for volunteering to complete the program, participants received a 10 dollar Amazon gift card at the end of the program, as well as, all course materials such as PowerPoint presentations distributed during the class.

According to Polit and Beck (2017), the role of an IRB is to ensure that the proposed study plans meet the federal requirements for ethical research practice. IRBs can approve, disapprove, or modify research plans. Some of the areas considered are to minimize risk to participants; determine if risks are reasonable in relationship to the expected benefits; ensure equitable selection of participants; ensure that informed content is sought; determine if provisions are made to monitor the research; to protect participant's confidentiality including any data; and that there are proper safeguards for any vulnerable populations involved. The role of the Walden IRB is to ensure that all research studies and doctoral capstone projects affiliated with Walden University meet

required ethical standards (Walden, n.d.). This encompasses the protection of human participants, as well as, ethical partnerships with other entities and the appropriate usage of academic tools. The role of the IRB at the organization in which the project will be conducted is to determine that the welfare and rights of research participants are equally protected, risks to subjects are lower than the potential benefits of the research and that there is an equitable selection of subjects and that informed consent will be procured and documented.

Analysis and Synthesis

In analyzing and synthesizing the data, IBM Statistics Software, SPSS Version 24 was used to record, track, organize, and analyze the evidence. I e-mailed survey tools to participants to complete prior to the first class. The survey tools completed at the end of the program were provided at the completion of class and collected by me before participants left the class.

According to Moody and McMillan (2002), data integrity refers to producing valid, sufficient and high-quality data. To maintain evidence integrity in this DNP project, the first step was to obtain feedback on the data collection process and survey tools from the project team. It is important for team members to be involved in all aspects of the project in order to assist with issues related to recruiting and supporting full staff participation. The training evaluation survey tools were reviewed and feedback provided by a nurse educator, three nurse managers and one clinical nurse. In maintaining integrity, it was important for the collection of data to be the same for each participant. It was also important that the data be collected in an environment as free

from distractions as possible to aid participants in giving reliable, accurate and thoughtful responses (Moody & McMillan, 2002). For the postsurveys completed the last day of the program, I provided ample time during class in order for participants to complete the surveys. To help decrease inadvertent missing data from the survey tools, the directions on the tools reminded participants to double check to be sure that they had answered all questions that they wished to answer completely. Once data were collected, I entered it into SPSS. I double checked all entries for accuracy. There were no extreme outliers in the data that needed to be considered in the final data analysis. Missing data was managed through SPSS missing value analysis function using "999" (IBM SPSS, n.d.). Also as part of the data collection and analysis process, I considered monitoring for bias. This included consideration of any nonresponse bias which occurs when respondents differ in a meaningful way from nonresponders and selection bias that may result in the voluntary sample not being representative of the nurses on a typical nursing unit in the organization. Lastly, I considered attrition to determine if and how the loss of participants over the course of the program impacted the program's outcomes.

The statistical procedure I used in the project was the paired *t* test. This test can be used when two measurements are obtained from the same individuals. If the means for the two sets of measurements are not independent, such as in the project, a paired *t* test can be used to determine if there is a significant mean difference between the pre- and postintervention scores (Polit & Beck, 2017). In the case of this project, having a significant difference in scores between pre- and postmeasurement, could indicate that

the mindfulness-based education strategy program had a positive impact on improving nurse well-being.

Summary

Section 3 of this paper, I provided clarification of several key definitions that are important to the understanding of this project including well-being, psychological well-being, mindfulness, stress, emotional exhaustion and psychological/emotional stress. Sources of evidence that I used to address the improvement of nurse well-being were identified and discussed. The procedure for recruiting participants was described including the use of e-mail, flyers posted on the nursing units, personal presentations to staff and through nurse managers. I provided a description of the survey tools used in the project and how they aligned with the constructs of the project. This was followed by a description of how participants in the study were protected and how the integrity of the data was ensured. In section 4 of this paper, I focused on an analysis and synthesis of the findings of the project; provided recommendations for addressing the gap in practice; described the process related to working with the project team; and discussed the strengths and limitations of the project.

Section 4: Findings and Recommendations

Introduction

The local problem addressed through this DNP project was to improve nurse well-being within the organization. Despite multiple organizational efforts, nurse well-being scores based on emotional exhaustion remained low as measured by the biannual Safety Attitudes Survey (see Sexton et al., 2006). For 2015, scores were 45% and for 2016 were 41%, against the national standard of 58% (Sexton et al., 2006). The organization also experienced an increase in RN turnover rates from 8.2% in FY12 to an all-time high of 14% in 2018. Additionally, some nurses leaving the organization reported feeling exhausted and burned out due to high patient volumes, rapid throughput of patients, and patient acuity. A few nurses even expressed that they were considering leaving professional nursing altogether.

Nursing is one of the most stressful professions due to multiple causes, such as frequent contact with patients and families, the need to respond rapidly in emergent situations, long work hours, staffing shortages, managing pain and suffering, providing comfort, administering interventions, and aiding with emotional situations (Botha et al., 2015; Koinis et al., 2015). Work stress, a type of emotional stress, and effective coping strategies have been significantly correlated to nurses' level of well-being (Chana et al., 2015). Low levels of nurse well-being impacts the nursing profession and healthcare because it has been associated with declining job satisfaction; decreased quality in work relationships and collaboration and ability to provide caring behaviors to patients; poor work engagement; and increased absenteeism, turnover, and increased errors (Chana et

al., 2015; Hall et al., 2016). This project addressed a gap in practice related to the lack of strategies to aid nurses in effectively managing emotional stress and emotional exhaustion in order to promote their personal well-being.

The practice-focused question was: Does implementing a mindfulness-based education strategy for nursing staff improve nurse well-being? Mindfulness strategies, such as meditation, gratitude and self-compassion, have been shown to decrease stress, which helps to improve well-being (Bazarko et al., 2013). Higher levels of mindfulness have been associated with decreases in anxiety and depression, use of adaptive coping strategies, interpretation of stress, and the ability to make decisions and to respond more effectively (McConville et al., 2017). The purpose of this project was to improve nurse well-being through a mindfulness-based education strategy as one approach for helping nurses to manage their emotional stress.

The sources of evidence used for this project were the MBI, a 22-item (see Appendix A), Likert type survey that measures emotional exhaustion, depersonalization, and personal accomplishments and a knowledge assessment administered before and after the 6-week, mindfulness-based education program . In addition, the postknowledge assessment also included a program evaluation section that allowed participants to evaluate the instructor's presentation style, class content, class location, and time of class as well as their own ability to apply mindfulness techniques in the work setting, management of stress, desire to continue mindfulness practices postprogram, and interest in attending similar programs in the future. A brief postclass evaluation was also completed by participants allowing them to provide feedback on each class session.

I obtained evidence for this project by manual methods. Staff who agreed to participate received the MBI and the preknowledge assessment surveys by e-mail in advance of the first class of the 6-week program along with instructions for completing the surveys. Participants created their own personal ID number, which they entered on each survey page, pre and post. Nurses placed completed presurveys in an envelope either on the nursing unit or during the first day of class. Nurses completing the 6-week program placed their postsurveys in an envelope at the conclusion of the last day of class. All survey data were confidential.

I used IBM Statistics Software, SPSS Version 24 to analyze the data. Statistical descriptive procedures included frequency counts for gender, age, pre- and post-meditation practice, number and length of practice sessions/week, and postprogram evaluation sessions. For the MBI, a dependent group, paired sample *t* test was used to determine if there was a statistically significant difference between the mean pre- and postscores for emotional exhaustion, depersonalization, personal accomplishment, and knowledge assessment questions. I reviewed the weekly class evaluations after each session to determine if any midprogram changes needed to be made.

Findings and Implications

Twelve participants notified me that they wanted to attend the program. Of the initial 12 participants, one participant did not return to class after the first session and did not offer any explanation. A second participant dropped out half-way through the program due to an extended leave of absence and was unable to complete the program. Ten nurses attended all six classes and completed the mindfulness-based education

program (see Table 1). Nine of the nurses were female and one was male. Forty-four percent of the nurses were 55 years or older, and 33% were in the 36- to 45-year-old range. The majority of the participants responding had greater than 25 years of nursing experience (see Table 2).

Table 1

Frequency Distribution for Age by Age Category

Age range	Frequency	Percent (%)
26-35 years	1	11.1
36-45 years	3	33.3
46-55 years	1	11.1
55+ years	4	44.4
Total	9	100.0

Note. $N = 10$.

Table 2

Frequency Distribution for Years of Nursing Experience

Age range	Frequency	Percent (%)
1-5 years	1	14.3
10-15 years	1	14.3
16-25 years	1	14.3
25+ years	4	57.1
Total	7	100.0

Note. $N = 10$.

Of the 10 participants who completed the program, only two had previously practiced meditation prior to attending the program (see Table 3). At the completion of the program, all participants indicated that they were practicing meditation either daily or

between one to five times per week. Postprogram, 40% of the participants reported meditation sessions of less than 5 minutes each.

Table 3

Frequency Distribution Participants Meditation Practice

Practice characteristics		Preprogram		Postprogram	
		Count	Percent (%)	Count	Percent (%)
Meditating					
	Yes	2	20.0	10	100
	No	8	80.0	-	-
Times/week					
	0	8	80.0	-	-
	1-2	1	10.0	6	60.0
	3-5	1	10.0	3	30.0
	5-7	0	0.0	1	10.0
Meditation length/minutes					
	None	8	80.0	-	-
	<5 minutes	-	-	4	40.0
	5 minutes	-	-	3	30.0
	10 minutes	1	10.0	2	20.0
	15 minutes	-	-	1	10.0
	20+ minutes	1	10.0		

Note. $N = 10$.

I used a paired samples *t* test to compare the Likert scale questions for knowledge assessment pre- and postprogram. There was a significant difference in scores for all four questions. The questions included basic knowledge of mindfulness practices, confidence in practice, application of practices, and belief that mindfulness practices support self-care (see Table 4).

Table 4

Knowledge Assessment Pre- and Post- Mindfulness-Based Education Strategy, Paired Samples Test

Criteria	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower *CI*	Upper *CI*	*t*	*df*	Sig. (2-tailed)
Knowledge Level	-1.000	.816	.258	-1.584	-.416	-3.873	9	.004
Confidence in Practice	-1.200	.789	.249	-1.764	-.636	-4.811	9	.001
Ability to apply in work setting	-1.300	1.059	.335	-2.058	-.542	-3.881	9	.004
Belief mindfulness practice supports self-care	-.556	.527	.176	-.961	-.150	-3.162	8	.013

I conducted frequency counts for the nine questions related to the program evaluation given to participants at the end of the 6-week program. Responses indicated a favorable reaction to the program. All of the participant responses were either *strongly agree* or *agree* except for one participant who disagreed that the time of the program made it easy to attend (see Table 5).

Table 5

Frequency Distribution Program Evaluation

Practice characteristics	Frequency	Percent (%)
Content easy to follow		
• Agree	1	10.0
• Strongly agree	8	80.0
Room location		
• Agree	3	30.0
• Strongly agree	6	60.0
Time of program		
• Disagree	1	10.0
• Agree	2	20.0
• Strongly agree	6	60.0
Success in applying mindfulness practices on the unit		
• Agree	5	50.0
• Strongly agree	4	40.0
Better able to manage stress		
• Agree	4	40.0
• Strongly agree	5	50.0
Increased mindfulness knowledge		
• Agree	5	50.0
• Strongly agree	4	40.0
Plan to continue mindfulness practice		
• Agree	3	30.0
• Strongly agree	6	60.0
Would like to see similar programs		
• Agree	2	20.0
• Strongly agree	7	70.0

Note. $N = 10$.

I used a paired sample *t* test to compare pre- and postscores for the MBI (see Table 6). There was a significant improvement between pre- and postprogram scores for emotional exhaustion. There was no significant difference for the depersonalization and personal accomplishment scores, pre- and postprogram.

Table 6

Maslach Burnout Inventory Scores for Emotional Exhaustion, Depersonalization, and Personal Accomplishment Pre- and Post-Mindfulness-Based Education Strategy with Paired Samples Test

Subscale	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower *CI*	Upper *CI*	*t*	*df*	Sig. (2-tailed)
Emotional Exhaustion	3.300	3.889	1.230	.518	6.082	2.684	9	.025
Depersonalization	.300	2.163	.684	-1.247	1.847	.439	9	.671
Personal Accomplishment	-1.100	3.635	1.149	-3.700	1.500	-.957	9	.364

Note. $N = 10$.

In examining the participant demographic data, 12 nurses volunteered to initially attend the program, but only 10 completed it. This was the result of one participant going on an extended leave of absence half-way through the program. A second individual left the program after the first class but did not offer a reason for leaving. Since this individual was a first-year clinical nurse, it would have been helpful to know the reason, for example, was the program not what was expected, did it not meet the participant's needs or was it too hard to leave the nursing unit to attend. Determining the best time for

educational programs and having the support of peers on the unit in order to provide coverage for patient assignments is an important consideration in helping nurses attend, particularly for newer nurses.

Most of the participants were over 36 years of age with 10 plus years of experience. Only one younger, less experienced clinical nurse attended the program. Possible explanations include, the amount of unit support from peers and the nurse manager to attend, timing and/or location of the classes, or other unit-based issues that prevented attendance. Another reason might have been that the topic of mindfulness, well-being and stress reduction may appeal more to nurses that have a longer work history.

The demographics showed that only two of the 10 nurses practiced meditation, 1-5 times a week for 5-15 minutes each session. This is important because most mindfulness programs are eight weeks in length and classes are two hours each. This program provided even inexperienced nurses with the knowledge and skills to successfully begin mindfulness practices in a fairly short period of time. At the completion of the program, all participants reported practicing meditation as a mindfulness practice. The significant improvement in the level of knowledge about mindfulness; confidence in practice; ability to apply mindfulness in the work setting; and the belief that mindfulness supports self-care as a result of the 6-week program is a marker for work setting programs' effectiveness.

In terms of the program evaluation, all participants felt the instructor's presentation style contributed to learning and that the content was easy to follow.

However, only 66.7 % of participants felt that the room location and timing facilitated attendance. Some participants commented that they felt there was too much noise outside of the room as a result of being on a nursing unit. All participants were able to apply mindfulness practices in their work setting, but almost all expressed some degree of difficulty in pausing for a 3 minute or less breathing break. I encouraged participants to continue efforts to incorporate mindfulness practices into their daily routines and to share what was working best for them with other participants. All participants agreed that they were better able to manage their stress at the end of the program. Several participants shared that they teamed up with family members to practice meditation together. All participants increased their mindfulness knowledge, planned to continue their practice and identified that they would like to attend similar programs in the future. These findings along with the participant's perception that the program improved their ability to more effectively manage stress, supports the benefits and potential impact of mindfulness-based education and practice to improve well-being.

Lastly, the results of the MBI showed that there was a significant improvement in the participant's level of emotional exhaustion following the 6-week mindfulness program. This is consistent with published research findings that identified a positive impact related to MBSR programs and reduced anxiety, stress and emotional exhaustion in healthcare participants (Bazarko et al., 2013). According to Lizano (2015), decreasing emotional exhaustion has an important impact on improving nurse well-being. Ultimately nurse well-being has the potential to improve the care and caring behaviors provided to patients, the health of the nurse and the health of the healthcare organization.

The non-significant difference for depersonalization and personal accomplishment can be attributed to the low depersonalization scores and the high personal accomplishment scores of participants at the beginning of the program. This has positive implications for patient care in that even though the participants were experiencing some degree of emotional exhaustion, they were still feeling engaged in their patient care and they still felt a sense of accomplishment with their work.

Several unanticipated outcomes or limitations occurred during the implementation of the project. One limitation was the small number of participants. This was in part because the program was being offered on the nursing unit and space was a limiting factor. However, two participants left the program unexpectedly lowering the final number of participants. The program was offered at 12:00 pm and lunch was provided anticipating that this would make it easier for nurses with 5 or less years of experience to attend. These incentives did not appear to influence this group's attendance. Those participants who did attend were case managers, nurse managers, assistant nurse manager, and mostly senior level clinical nurses. It would be important to test if the same results would be achieved if less senior nurses had attended. Another issue encountered was the high number of participant vacations that occurred during the 6-week program. Even though handouts and activity sheets were provided for each class, and the instructor reviewed the materials for those absent, the participants did not have the benefit of in-class discussion that could have enhanced their learning outcomes. The 30-minute time-frame of each class session made it difficult to include all the planned materials and diminished time for practice, discussion and questions. For at least two sessions, the

class exceeded 30-minutes, which was noted by the participants. Lastly, participants and non-participants provided feedback about the difficulty committing to attend and fitting six weekly classes into their busy work and personal schedules.

Improving nurse well-being through a mindfulness-based education strategy had a number of positive implications for the participants, the community, the institution and the health system. At the individual level, class participants identified that they were able to manage their stress better as a result of the program and the MBI scores for emotional exhaustion showed a significant positive difference at the completion of the program. One participant commented that she felt the class gave her permission to take time for herself during the work day which she has always felt guilty about doing prior to attending the program. Another participant shared that she recognized that she was always putting the needs of others first which caused her to overwork, become exhausted and limit her self-care.

This project provided an effective means for nurses to support their own self-care, improve their ability to manage stress and to decrease emotional exhaustion which is a key factor for improving nurse well-being (Lizano, 2015). The participants were highly engaged and have encouraged other staff to participate in future offerings. Effectively managing stress during the work day and improving overall well-being through mindfulness practices has the potential to improve the overall health of the nurse, decrease depression and anxiety, decrease emotional exhaustion, enhance work relationships, improve decision-making and to moderate the perception of job demands (Bazarko et al., 2013; Grover et al., 2017; Guillaumie et al., 2016; Van der Riet et al.,

2018). This program provided the participants with the basic knowledge and skills to impact all of these areas. At the community level, improved nurse well-being supports improved patient care outcomes and patient satisfaction. Nurses with higher levels of nurse well-being are better able to be present with patients and to provide caring behaviors in a more compassionate manner (Chana et al., 2015; Department of Health, 2009). At the institutional level, higher levels of nurse well-being have been associated with better job engagement, less absenteeism, lower levels of turnover, improved collaboration and communication within multi-disciplinary teams and fewer medical errors (Chana et al., 2015; Hall et al., 2016). In terms of the health system, teaching nurses and other healthcare staff mindfulness practices to help manage stress to improve well-being has the potential to shift the systems' culture to provide kinder and more compassionate care while supporting the recruitment and retention of the healthcare workforce. Increasing healthcare staff burnout is well-documented in the literature and is experienced among newer nurses, tenured nurses and medical staff (Laschinger & Fida, 2014). Providing education and opportunity for guided practice to effectively manage stress, and promoting mindfulness practices, particularly early in healthcare careers, is critical to attract and retain talented individuals to healthcare professions.

Potential implications for positive social change include helping to ensure that the nursing workforce is healthier, engaged, caring, present with patients and families and able to provide safe care that results in higher quality patient outcomes. Positive social change serves to improve the social and human condition (Walden University, 2018). Mindfulness programs such as this DNP project have been shown to decrease nurses'

emotional exhaustion, improve well-being and serves as an effective tool for managing stress when practiced regularly. The well-being of patients and families also has the potential to improve as recipients of care that is safer, compassionate and that results in quality outcomes.

Recommendations

Using findings from this DNP project, the following recommendations will be shared with nurse leaders to consider. First, is to provide the course content in a variety of different formats. Class participants felt that it was important to provide this information to all nurses, including newly hired, experienced and new graduates, as part of orientation. Second, would be a monthly get-together of nursing staff who are interested in learning and practicing mindfulness to support each other in strengthening and sustaining mindfulness-practices, including meditation. Thirdly, based on participant feedback, offer the program in 1 day or provide an online modular format. Because mindfulness strategies require a commitment to ongoing practice to be most effective, the on-line modular format could be beneficial in allowing time for practice provided module completion is spread out over a month or two. Future classes/programs will need to include greater feedback from clinical nurses in order find the best time, location and format that will enable nurses to attend. Consideration should also be given to the use of zoom sessions that could allow staff to attend if they are off-site. Lastly, incorporate a 30-minute session into the regularly scheduled Comprehensive Unit-based Safety Program or other meetings because levels of staff stress show an association with safety concerns. Expanding mindfulness programing could also be accomplished by working

through the organization's Healthy at Work Program and the newly forming unit-based health champions which would have the potential to expand the program beyond nursing staff.

The gap in practice that this DNP project sought to address was the lack of strategies to aid nurses in more effectively managing emotional stress in order to improve nurse well-being. Overall there was much interest by participants in having additional programs on mindfulness. Participants strongly agreed that the content was important in helping them better manage their stress not only at work but also in their personal lives.

Contributions of the Doctoral Project Team

The doctoral project team, consisting of departmental nursing leadership and one bed-side clinician, met with me before and after the implementation of the project. Before the project began, team members were provided an overview of the project and the evidence that supported it. Team members provided input on the course objectives, content, class design, location, time, evaluation surveys and on the instructions for completing the surveys. Three of the team members joined as participants in the project. The departmental nurse educator provided an additional review of the evaluation surveys including recommendations for edits which were subsequently made. Managers of the nursing units being offered the mindfulness program agreed to provide lunch for the participants. Each project team member received a book by Cameron (2018), *The Mindful Day: Practical Ways to Find Focus, Calm, and Joy from Morning to Evening*, as a gift for participating on the project team. At the completion of the program I e-mailed the evaluation survey results, including the knowledge assessment, program evaluation,

and MBI to the project team members. Members were asked to review the results and to make recommendations regarding potential next steps within 2 weeks. A team meeting was then scheduled in order to discuss the results and to develop the final recommendations with me. Plans are currently being made to continue offering the program, however, the appropriate class format, for example multiple classes and/or a several day program are still under consideration with nursing leadership.

Strengths and Limitations of the Project

The strengths of the DNP project included the use of the MBI which is a validated tool for measuring nurse well-being. A second strength was that the course content was based on the mindfulness-based stress reduction curriculum developed by Kabat-Zinn at the Center for Mindfulness in Medicine, Healthcare and Society, University of Massachusetts which is an evidence-based, time-tested program and a review of current research evidence. Third, the project team informing the project was highly engaged and offered important feedback during the project development. Last, the project participants were also highly engaged and were committed to completing the practice activities between sessions.

The primary limitations of the project were that the number of participants was small and did not represent the range of ages and years of practice of nurses on the nursing units. Additionally, the male to female ratio and the participant's cultural diversity did not reflect that of the nursing units. Despite the lack of representativeness, the project results demonstrated that mindfulness-based education can improve nurse well-being and stress management. Lastly, data were only collected pre and postprogram

completion. The project could have been stronger if a third data collection was conducted at 3 months postprogram to see if practice and results were sustained.

Recommendations for similar topics include ongoing practice sessions monthly for participants who want to further explore mindfulness strategies, resilience in the workplace and a more in-depth class on self-compassion. A second recommendation was to include other team members not just nurses. Lastly, it was recommended that I obtain more feedback from staff working directly with patients in order to see what times would most enable them to attend the program.

Section 5: Dissemination Plan

Dissemination Plan

Dissemination of research and evidence-based project findings is a vital component to successful positive change and the implementation of best practices or innovations (White, Dudley-Brown, & Terhaar, 2016). My plans to disseminate the information about the project and the findings within the institution include first sharing the findings with the project team for their feedback and recommendations. Next, the findings will be shared with the participants and other staff that may want to attend a brief meeting to review the results and recommendations. Information about the project will also be shared at one of the weekly departmental nursing leadership meetings, which includes the nursing director and the leadership team for two departments. Another opportunity to disseminate the project information would be through the departmental newsletter. At the hospital level, one strategy would be to present a podium or poster presentation at the hospital's annual Scholar's Day program where results of all forms of nursing inquiry are presented. Another hospital level strategy for dissemination would be to continue to work with the senior director of the health system's Office of Well-Being to identify opportunities to share results and implications, such as presenting at the hospital-wide nursing leadership forum and/or nursing town hall meetings.

Based on the nature of this project, the primary audience appropriate for dissemination is nursing staff at all levels, from bedside to boardroom. However, improving well-being through mindfulness-based education strategies applies to all healthcare staff that regularly work with patients and families. According to Reith

(2018), burnout has reached epidemic levels in the United States for healthcare professionals with over half of physicians and a third of nurses experiencing symptoms. My plans for dissemination also need to include identifying forums in which to communicate this information to other healthcare professionals. This could be done potentially in collaboration with other departmental leadership as well as the Office of Well-Being.

Analysis of Self

In analyzing myself in the role of practitioner, scholar, and project manager, I would say that it was an important learning opportunity to manage a project of this magnitude from start to finish. The DNP project pulled together many of the concepts that I learned over the course of the program in a real-life situation. I feel that as a practitioner I have learned a lot about the topic of how to promote nursing well-being at the personal and organizational level. I also have learned more about what staff experience in their daily practice as a result of teaching this program. From a scholarly prospective, I have been able to continue to build skills in evidence-based practice, working with stakeholders such as the project team, navigating the IRB process, and how to effectively translate the knowledge to nursing staff in a way that is meaningful and applicable to their work setting. I have also built skills in program evaluation, data analysis, and working with SPSS. In terms of project management, the DNP project has allowed me to continue to build skills particularly in the areas of obtaining feedback from key stakeholders and project planning. Although in my past and current professional positions, I have had considerable experience in managing projects, I believe the skills

that I have learned through this project will make me a much better project manager long term.

In terms of completing the DNP project, one of the biggest challenges I faced was in recruiting participants. Even though I provided in-person information about the program at staff meetings and written information to staff that was reviewed by the project team, participants were slow to sign up. In the end what worked best was rounding on the units and talking one-on-one with staff. I found that staff were uncertain about what the program would be like and its benefits. One good aspect is that now that the program has been completed and participants have talked with other staff members, staff have expressed the desire to participate in future offerings.

Another major insight is that nurses felt that they could not commit to six consecutive weekly classes. Even though it seemed that offering a 30-minute class at lunchtime and providing a grab-and-go type of lunch would make it easy for staff to attend, this was not the case. This points to the need for much more feedback regarding class format, locations, and times going forward from clinical nursing staff.

Another important insight is the need to have a discussion with departmental leadership about whether they feel that this program is important enough to schedule staff off of the units in order to allow them to attend. While the voluntary approach for attendance to the program worked well for the case managers, nurse managers, and other nursing leaders, it did not work well for staff with patient assignments. Having two nurse managers attend the program and experience the content first-hand will help in providing support during this discussion.

Summary

With this DNP project, I sought to improve nurse well-being through a mindfulness-based education strategy consisting of six, 30-minute classes, one each week for a 6-week period. A paired *t* test was used to test improvements in participants' levels of emotional exhaustion, depersonalization, and personal accomplishment. Level of emotional exhaustion was the one area that showed a significant improvement at the end of the 6-week, mindfulness-based educational program. Participants in the program also found that they were better able to manage their stress, gained knowledge and confidence in using mindfulness practices, believed that mindfulness practice could be used within their work setting, and contributed to self-care. Participants planned to continue mindfulness practices going forward. Mindfulness-based strategies have been shown to decrease stress and contribute to nurse well-being (Bazarko et al., 2013; Guillaumie et al., 2016). Emotional stress/emotional exhaustion are significantly correlated with nurses' level of well-being (Chana et al., 2015). This project demonstrated that teaching nurse's mindfulness-based strategies was able to improve the level of emotional exhaustion in participants and enabled them to more effectively manage their stress, which has the potential to positively impact well-being.

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Appendix A: Permission Letter for Maslach Burnout Inventory

mind garden

www.mindgarden.com

To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Maslach Burnout Inventory forms: Human Services Survey, Human Services Survey for Medical Personnel, Educators Survey, General Survey, or General Survey for Students.

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument form may not be inclu.ded or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below. Sample Items:

MBI - Human Services Survey - MBI-HSS:

I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job. I don't really care what happens to some recipients.

MBI - Human Services Survey for Medical Personnel - MBI-HSS (MP):

I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job. I don't really care what happens to some patients.

MBI - Educators Survey - MBI-ES:

I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job. I don't really care what happens to some students.

Cont'd on next page

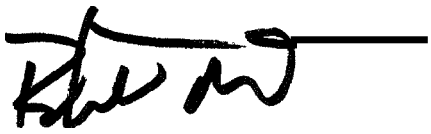
MBI - General Survey - MBI-GS:

I feel emotionally drained from my work. In my opinion, I am good at my job.
I doubt the significance of my work.

MBI - General Survey for Students - MBI-GS (S):

I feel emotionally drained by my studies. In my opinion, I am a good student.
I doubt the significance of my studies.

Sincerely,



Robert Most
Mind Garden, Inc.
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